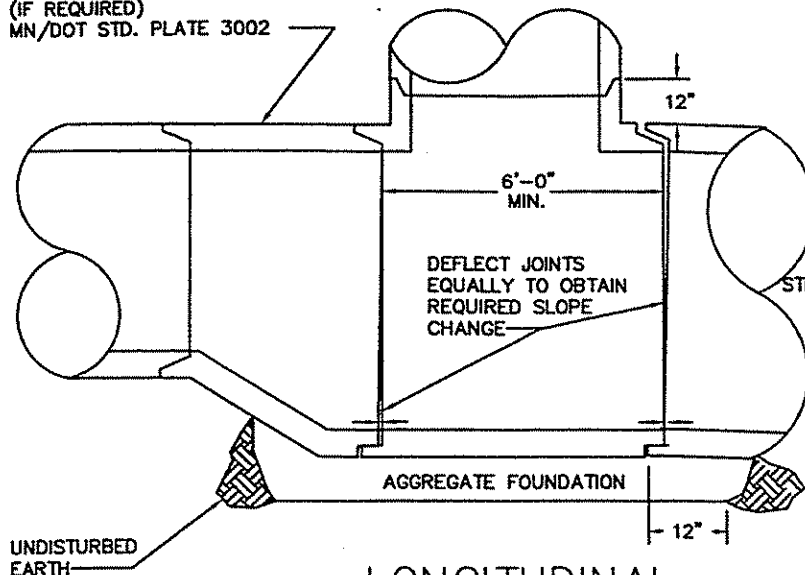


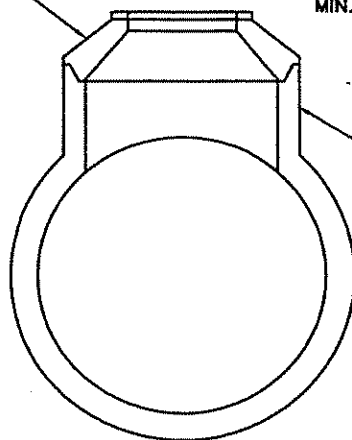
ECCENTRIC INCREASER PIPE  
(IF REQUIRED)  
MN/DOT STD. PLATE 3002



## LONGITUDINAL SECTION

SHORT CONE  
MN/DOT STD. PLATE 4010

WHERE PIPE  
COVER IS LESS  
THAN 6'  
(NO STEPS REQ.)



SET RINGS IN 3/8" MIN.  
MORTAR BED. PLASTER  
EXTERIOR WITH 1/2" MORTAR  
PRECAST ADJUSTING RINGS  
(MN/DOT STD. PLATE 4010)  
MIN.-1 MAX.-2

PRECAST TEE  
SECTION, BARREL  
TO BE SAME CLASS  
AS ADJACENT RCP.

## TRANSVERSE SECTIONS

SHIM FRAME TO MATCH GRADE  
1/2" MORTAR THICKNESS MIN.

CASTING A & B  
STD. PLATES 2201D & 2202C

12" WIDE POLYPROPYLENE  
M.H. STEPS CONFORMING  
TO ASTM C-478  
M.A. INDUSTRIES  
PA-I-PF OR EQUAL

PRECAST RISER  
SECTION AS REQ.

27"

48"  
DIA.

16"  
O.C.

### NOTES:

1. THIS MANHOLE FOR USE ON STRAIGHT RUNS OF MAINLINE SEWER. 42" AND LARGER SLOPE CHANGE CAN BE ACCOMPLISHED BY DEFLECTING JOINTS AS NOTED HEREIN. DIAMETER CHANGE CAN BE ACCOMPLISHED WITH ASSOCIATED ECCENTRIC INCREASER.
2. PRECAST RISER SECTIONS TO MEET ASTM C-478
3. JOINTS SHALL USE O-RING RUBBER GASKET TO CONFORMING TO ASTM C-443
4. MAXIMUM JOINT DEFLECTION FROM "HOME" IS 3/4" FOR 42" I.D. AND 1" FOR 48" I.D. OR GREATER CORRESPONDING MAXIMUM SLOPE CHANGE PER JOINT IS:

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota

*Joseph J. Mueller*  
JOSEPH J. MUELLER  
Date 9-2-02 Lic. No. 13942

PIPE I.D.	42"	48"	54"	60"	66"	72"	84"	90"	96"
MAX. SLOPE CHANGE / JOINT	1.78	2.08	1.85	1.66	1.51	1.38	1.19	1.11	1.04 %

APPROVED \_\_\_\_\_

CITY ENGINEER

CITY OF ST. PAUL  
DEPARTMENT OF PUBLIC WORKS

MANHOLE, TYPE VI

Date of  
Revision

JULY  
2002

Standard  
Plate  
No.

2106D